On-site Solar Energy for your Facility

December 10, 2021

Partners for Pollution Prevention

PSG ENERGY GROUP

A DIVISION OF

envelop

AGENDA

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- Introductions
- Drivers and incentives
- Case Study
- On-site solar opportunities
- Next Steps

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open control systems

validated custom solutions

PSG ENERGY GROUP

OUR STORY

A family of 100% privately held, Midwest based companies with the common goal of transforming communities and facilities into an efficient, environmentally friendly and cost-effective portfolio.

About PSG Energy Group

We become a partner with our clients throughout the lifetime of each project to ensure the client receives maximum benefit.

Our Markets:

- Commercial & Industrial
- Agriculture
- Education
  - K-12
  - Higher Education
- Municipalities
- Hospitality

Our Specialties:

- Utility bill & rate analysis
- Applicable local, state, & federal policy
- Extensive solar PV knowledge
  - Solar PV installation
  - Solar PV maintenance
- Relationships with utilities and subcontractors

Projects

Taylor Community School Corporation
Kokomo, IN

"As egg farmers, we didn't fully understand solar power, but could see its potential to offset rising energy costs and reduce carbon emissions. We found out generating, using, and getting the most value out of solar power requires the coordination of many parties, including engineers, utilities, regulators, and system owners. PSG's team went beyond our expectations to satisfy these stakeholders and help us understand this valuable resource. Thanks to their work, we now have a solar energy system with an excellent ROI that we can count on for many years of clean power."

Dan Krouse
VP of Operations, MPS Eggs Farms
North Manchester, IN

PSG Energy Group Project Portfolio

Number of Sites: 90

Combined Size: 30 MW DC

Number of Panels: 85,000+

To-date Portfolio Production: 65,500,000 kWh

Bendix Commercial Vehicles
Huntington, IN

Midwest Poultry Services
Mentone, IN

Drivers and Incentives

Drivers for facilities to invest in onsite renewables

Cost-out Opportunity: Reduce current utility spend and exposure to increasing rates.

Decrease tax obligation: Take advantage of tax incentives. 2021 & 2022: 26% federal investment tax credit (ITC). % is applied against turn-key project cost.

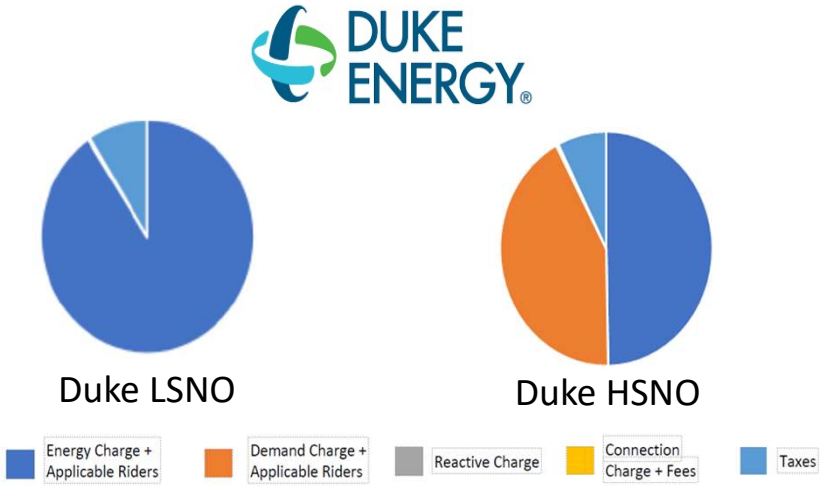
Environmental Impact: Deliver a tangible, sustainable commitment to your employees, customers and local community. Environmental attribute of project can lead to grant eligibilities or additional revenue streams through Solar Renewable Energy Certificates (SREC) Market

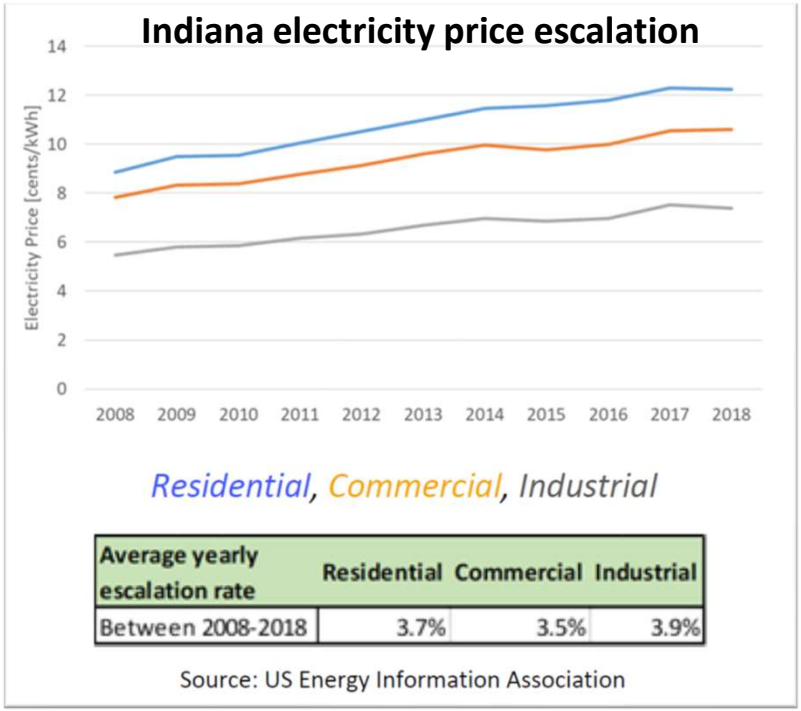
Education Component: On-site renewables provides teachers and students with live, local data and exposure to equipment. Daily review available through URL dashboard, in addition PSG provides classroom support and guided fieldtrips through ground mount arrays.

Attract Talent: Specifically innovative thinkers and future leaders of the organization.

Market positioning: Consumers expect companies to shift to a sustainable mindset and are speaking with their wallets. Opportunity for organization to become a leader in its sector.

Indiana utility rates and historical escalation





Average yearly escalation rate	Residential	Commercial	Industrial
Between 2008-2018	3.7%	3.5%	3.9%

Source: US Energy Information Association

How does the Federal Solar Investment Tax Credit (ITC) work?

- The tax credit is a dollar-for-dollar reduction in the income taxes that a person or company claiming the credit would otherwise pay the federal government.
- The ITC is based on the amount of investment in solar property.

Therefore…

If a facility invests $500,000 in a solar system in 2021.

It would take $130,000 (26%) off the tax liability for the year the system is energized.

- *Note: if tax exposure was under $130,000, remaining credit would be deferred into future tax period(s).*
- Project is also eligible for 100% bonus MACRS depreciation

The 26% ITC has been extended through 2022

USDA REAP Grant Summary

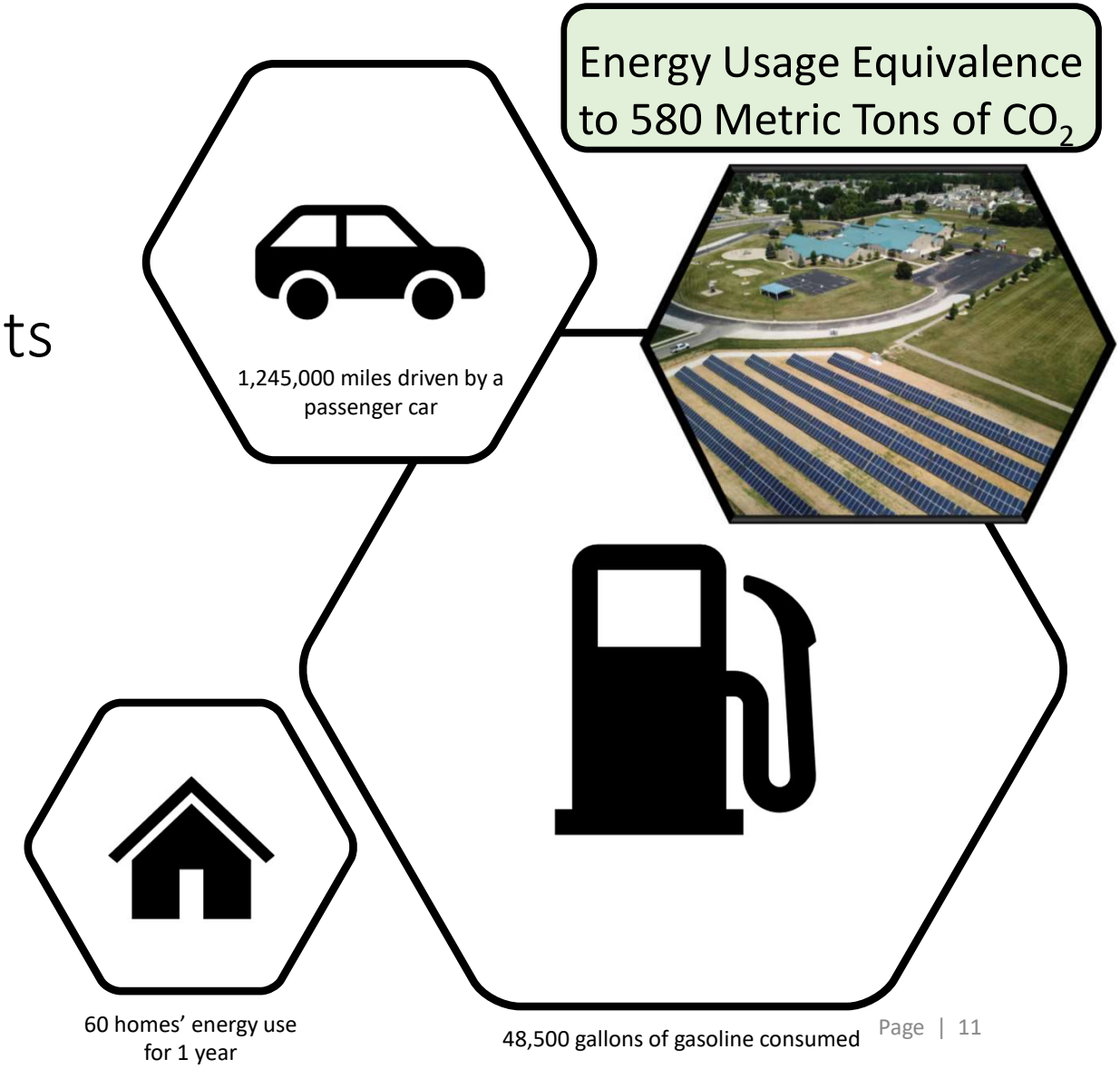
The United States Department of Agriculture (USDA) offers the Rural Energy for America Program (REAP) Grants for the purchase, installation and construction of a **renewable energy system** or energy efficiency upgrades. REAP creates opportunities for economic development for **rural small businesses**, farmers and ranchers by supporting renewable energy and energy efficiency projects. **REAP grants provide 25% of the total system costs, with a maximum grant of $500,000 for renewable energy systems and $250,000 for energy efficiency systems.**

Grant Eligibility:

- Grant must go towards the purchase of a renewable energy system or energy efficiency upgrades
- Chosen technology must be commercially available
- Project must have technical merit
- Project must be located in a designated rural area
- Applicant must be the owner of the project
- Sites must be controlled by the applicant

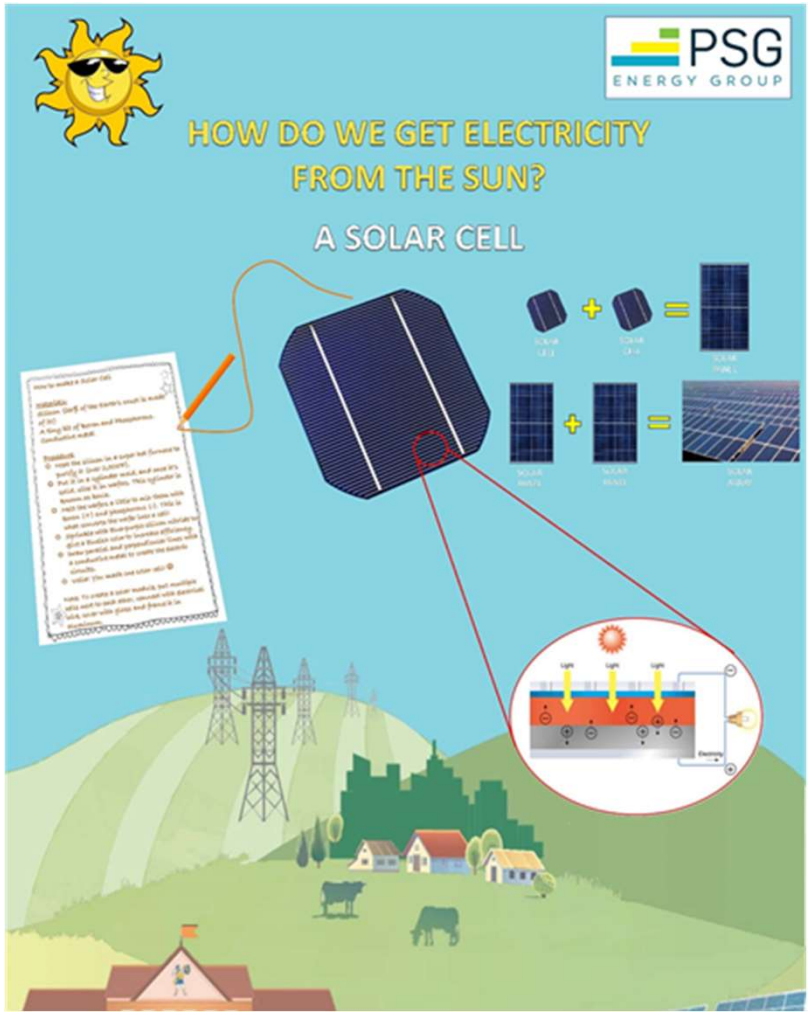
Environmental Benefits of an example system

- Assume a 620 kW DC / 500 kW AC system
- Roof mount takes up 60,000 sqft
- Ground mount takes up 95,000 square feet (approx. 2 acres)
- Produces 700,000 kWh of energy in the first year
- Production from this system will offset 580 metric tons of CO_2 in the first year



On-site solar arrays provides inspiration to community and innovative educational experiences for local students

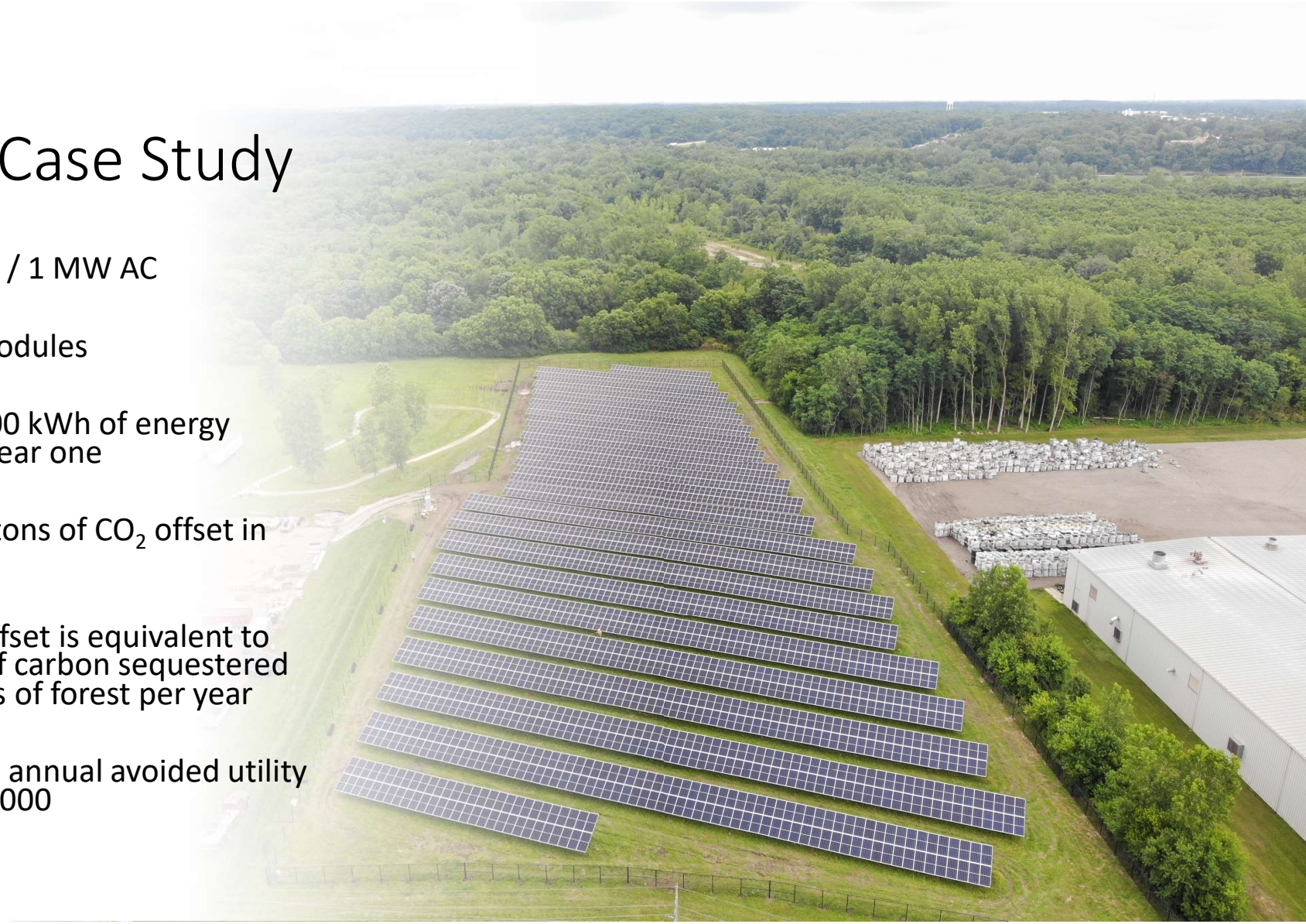
- Demonstrate to employees, customers and the community the commitment to offsetting carbon footprint
- Support STEM Events for community and local school engagement.
- Provide exposure to growing and innovative career opportunities



Industrial Case Study

Bendix Case Study

- 1.168 MW DC / 1 MW AC
- 2,612 solar modules
- Over 1,500,000 kWh of energy produced in year one
- 1,050 metric tons of CO_2 offset in year one
- The carbon offset is equivalent to the amount of carbon sequestered by 1,290 acres of forest per year
- An estimated, annual avoided utility costs of $140,000



Agriculture Case Study

MPS EGG FARMS

Project Overview

Project Details Size:
1.1 MW

Number of Panels: 3,450

Annual Production:
1,422,260 kWh

Solution: Fixed-tilt Ground Mount

"An on time and on budget installation was our initial expectation, but PSG delivered much more. They helped us understand exactly how solar power affects our utility bill so we could confirm our energy savings…I would encourage any organization to consider using solar energy and highly recommend working with PSG."

Dan Krouse, VP of Operations,
MPS Egg Farms, North Manchester, IN

On-site Solar Opportunities

Roof Mounted Systems

The top image is a **ballasted** systems that PSG Energy Group installed at Ball State University

- Roof warranty remains intact
- Can accommodate a variety of roofing types
- Adds 5 to 7 pounds per square foot
- Limited roof penetrations

The bottom image is a **flush mounted** system that PSG installed at Huntington University

- Roof warranty remains intact
- Ideal for south facing pitched roofs
- Can accommodate a range of tilted roofs
- Adds 3 to 4 pounds per square foot
- Limited roof penetrations

Ground Mounted Systems

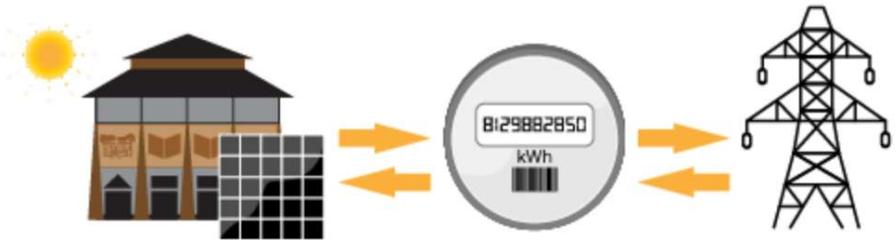
- Top image: A fixed tilt system at Taylor Community Schools in Kokomo, IN
- Bottom image: A tracker system at East Washington Schools in New Pekin, IN
- Below image: A carport structure at the City of Bloomington, IN

Ground Mounted Ballasted Systems

- Top image: An East-West facing system at the City of Connersville Water Treatment Plant
- Bottom image: A ballasted ground mount system at Stout Field, an Indiana National Guard armory

- These types of ground mount systems are typically used when soil conditions make driven posts not feasible.
- Instead of having to pound posts, these systems are weighted down to keep them in place.

Grid-tied / Net Metering Projects in Indiana



- Net metering is a billing mechanism that credits solar energy system owners for the electricity they add to the grid
- Maximum system size is 1.0 MW AC
- Export will be valued at 1.25 times wholesale rate (i.e. pay utility to store excess energy until later use)
- PSG can review solar + storage options

DUKE ENERGY®

NIPSCO® A NiSource Company

aes Indiana

INDIANA MICHIGAN POWER An AEP Company

VECTREN A CenterPoint Energy Company

Implementing a Project

Getting started…

Due diligence and consideration throughout the project sets PSG and Envelop Group apart

- Customer and partner relationships
- Utility analysis and coordination
- Site visits and energy audits
- Technical expertise and grant application support
- Conversations with project partners: Owner, City, County, Utility and Financing partners

Preliminary site feasibility review:

Utility consumption and rate tariff review
Preference on ground mount vs roof top array
Age and material of roof? Plans for roofing projects? Roof pitch?
Do structural and electrical drawings exist for the facility?
Subsurface conditions? Future use of grounds / facility expansion? Flood plain analysis
Location of point of interconnection? Transformer? Electrical rooms?
Future plans for facility? Foresee any increase or decrease in electricity consumption?

Thank You!

Please feel free to reach out with any follow up questions or to kick-off a feasibility study!

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